

DaimlerChrysler AG

Patent claims

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1. A user interface for a communication system (2) in a motor vehicle (1) which, in a restricted operating mode, restricts a functionality of a radio interface (3) for wireless connection to a radio communication network, characterized in that the user interface (4) activates a waiting function (4.1) for an incoming call in the restricted operating mode, which informs the caller of the cause and/or expected duration of the operation with restricted functionality.

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2. The user interface as claimed in claim 1, characterized in that means (8) for determining an expected duration of the restricted operating mode exist.

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3. The user interface as claimed in claim 1 or 2, characterized in that the waiting function (4.1) arranges the indication of the restricted operating mode in dependence on the expected duration of the restricted operating mode and/or on the person of the caller.

4. The user interface as claimed in one of claims 1 to 3, characterized in that the indication comprises a voice output (4.2) for outputting information and/or a sound output (4.3) for bridging the waiting time.

5. The user interface as claimed in one of claims 1 to 4, characterized in that the indication comprises at least one output pause with an adjustable duration.

6. The user interface as claimed in claim 5, characterized in that the at least one output pause can

be inserted before and/or after the information output and/or before and/or after the sound output (4.3).

7. The user interface as claimed in one of claims 3
5 to 6, characterized in that at least two time ranges
are provided for arranging the indication, one of which
is selected in dependence on the expected duration
determined for the restricted operating mode, wherein
the time range containing the value of the expected
10 duration is selected.

8. The user interface as claimed in claim 7,
characterized in that for each time range, at least two
indication variants are provided, one of which can be
15 selected by means of a random number generator (4.4).

9. The user interface as claimed in claim 7 or 8,
characterized in that the sound output (4.3) comprises
20 at least a part of a known musical item, wherein a time
position within the musical item with which the sound
output (4.3) begins, calculated to the end of the
musical item, corresponds to the required duration for
the sound output (4.3) for bridging the waiting time.

25 10. The user interface as claimed in claim 7 or 8,
characterized in that the sound output (4.3) comprises
discrete sound events and/or changeable sound events.

30 11. The user interface as claimed in claim 10,
characterized in that the changeable sound events are
achieved by varying a basic pattern by changing the
instrumentation and/or the pitch and/or the register
and/or the volume and/or the dynamic range and/or the
speed and/or the rhythm and/or the tone sequence and/or
35 the melody.

12. The user interface as claimed in claim 11,
characterized in that an acoustic echo sounding signal
or a metronome signal is used as basic pattern.

13. The user interface as claimed in one of claims 10 to 12, characterized in that the sound events are changed in proportion to the decreasing waiting time.

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14. The user interface as claimed in one of claims 3 to 13, characterized in that the possible callers are divided into different categories, the different categories in each case comprising separate personal voice outputs of the user.

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15. The user interface as claimed in claim 14, characterized in that the different categories comprise a private domain and/or a business domain and/or a neutral domain.

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16. A communication system for a motor vehicle (1) with a radio interface (3) for wireless connection to a radio communication network and for setting up a corresponding communication link (7), characterized by a user interface (4) according to one of claims 1 to 13.

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17. An operating method for a communication system (2) in a motor vehicle (1), the functionality of which is restricted in dependence on predetermined conditions in operation, characterized in that, in the operation with restricted functionality, a waiting function (4.1) is activated with an incoming call and the expected duration of the restricted mode is determined, the caller being informed about the cause and/or the expected duration of the operation with restricted functionality.

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18. The operating method as claimed in claim 17, characterized in that the indication of the restricted operating mode is arranged in dependence on the expected duration of the restricted operating mode and/or on the person of the caller.

19. The operating method as claimed in claim 17 or 18,
characterized in that the indication is output to the
caller as voice output (4.2) for information output
5 and/or as sound output (4.3) for bridging the waiting
time.

20. The operating method as claimed in one of
claims 17 to 19, characterized in that the indication
10 comprises at least one output pause with adjustable
duration.

21. The operating method as claimed in claim 20,
characterized in that the at least one output pause is
15 inserted before and/or after the information output
and/or before and/or after the sound output.

22. The operating method as claimed in one of
claims 18 to 21, characterized in that the sound output
20 (4.3) comprises discrete sound events and/or changeable
sound events.

23. The operating method as claimed in claim 22,
characterized in that the changeable sound events are
25 achieved by variation of a basic pattern by changing
the instrumentation and/or the pitch and/or the
register and/or the volume and/or the dynamic range
and/or the speed and/or the rhythm and/or the tone
sequence and/or the melody.

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24. The operating method as claimed in claim 22 or 23,
characterized in that the sound events are changed in
proportion to the decreasing waiting time.